

FORM PTO-1449
INFORMATION DISCLOSURE STATEMENT

01/18/2000

Docket No.: LD125b Sheet 1 of 5

Serial No.: 09/084,542 Group: 162

Applicant: Gregory D. Vite et al.

Filing Date: May 26, 1998

U.S. PATENT DOCUMENTS APPLICATIONS

Examiner Initial		Document Number	Date	Name	Class	Sub-class	Filing Date
	AA	08/856,533	5/14/97	Nicolaou, K., et al.	—	—	5/14/97
	AB	08/923,869	9/4/97	Nicolaou, K., et al.	—	—	9/4/97
	AC	60/032,864	12/13/96	Nicolaou, K., et al.	—	—	12/13/96

FOREIGN PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Country	Class	Sub-class	Filing Date
** BC	BA	4138042.8	5/27/93	Germany (German and English abstract)	—	—	
** BC	BB	19639456.2	5/29/97	Germany (German and English translation)	—	—	
** BC	BC	19542986.9	5/29/97	Germany (German and English translation)	—	—	
** BC	BD	19636343.8	3/5/98	Germany (German and English abstract)	—	—	
** BC	BE	19645361.5	4/30/98	Germany (German and English abstract)	—	—	
** BC	BF	19645362.3	4/30/98	Germany (German and English abstract)	—	—	
** BC	BG	19647580.5	5/28/98	Germany (German and English translation)	—	—	
** BC	BH	19701758	7/23/98	Germany (German and English abstract)	—	—	
** BC	BI	19707505.3	9/3/98	Germany (German and English abstract)	—	—	
** BC	BJ	19713970	10/8/98	Germany (German and English abstract)	—	—	
** BC	BK	19720312	11/19/98	Germany (German and English abstract)	—	—	
** BC	BL	19821954	11/19/98	Germany (German and English abstract)	—	—	
** BC	BM	879 605	11/25/98	Europe (German and English abstract)	—	—	
** BC	BN	19726627	12/24/98	Germany (German and English abstract)	—	—	
** BC	BO	93/10121	5/27/93	World (PCT as published and English abstract)	—	—	
** BC	BP	97/19086	5/29/97	World (PCT as published and English translation)	—	—	
** BC	BQ	98/08849	3/5/98	World (PCT as published and English abstract)	—	—	
** BC	BR	98/22461	5/28/98	World (PCT as published and English translation)	—	—	
BC	BS	98/24427	6/11/98	World	—	—	

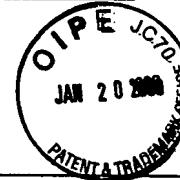
** structures only

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Brenda Coleman

August 14, 2000

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Docket No.: LD125b Sheet 2 of 5
 Serial No.: 09/084,542 Group: 1623
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<i>BC</i>	BT	98/25929	6/18/98	World (PCT as published and priority documents: U.S. 60/032,864, 08/856,533, 08/923,869)	—	—	
** <i>BC</i>	BU	98/38192	9/3/98	World (PCT as published and English abstract)	—	—	
** <i>BC</i>	BV	98/47891	10/29/98	World (PCT as published and English abstract)	—	—	
<i>BC</i>	BW	99/01124	1/14/99	World	—	—	
** <i>BC</i>	BX	99/03848	1/28/99	World (PCT as published and English abstract)	—	—	
** <i>BC</i>	BY	99/07692	2/18/99	World (PCT as published and English translation)	—	—	

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

<i>BC</i>	CA	Balog, A., et al., "Total Synthesis of (-)-Epothilone A", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 35, No. 23/24, 2801-2803 (1996)
<i>BC</i>	CB	Bertini, F., et al., "Alkenes from Epoxides by Reductive Elimination with Magnesium Bromide-Magnesium Amalgam", <i>Chem. Commun.</i> , 144 (1970)
<i>BC</i>	CC	Bollag, D.M., et al., "Epothilones, A New Class of Microtubule-stabilizing Agents with a Taxol-like Mechanism of Action", <i>Cancer Res.</i> 55, No. 11, 2325-2333 (1995)
<i>BC</i>	CD	Fujisawa, T., et al., "Deoxygenation of Epoxides to Olefins with FeCl_3 - n-BuLi System", <i>Chem. Lett.</i> , 883-886 (1974)
<i>BC</i>	CE	Fujiwara, Y., et al., "Reductive Coupling of Carbonyl Compounds to Olefins by Tungsten Hexachloride-Lithium Aluminum Hydride and Some Tungsten and Molybdenum Carbonyls", <i>J. Org. Chem.</i> , Vol. 43, No. 12, 2477-2479 (1978)
<i>BC</i>	CF	Gladysz, J. A., et al., "Deoxygenation of Epoxides by Metal Atom Cocondensation", <i>J. Org. Chem.</i> , Vol. 41, No. 22, 3647-3648 (1976)
<i>BC</i>	CG	Hofle, G., et al., "Epothilone A and B - Novel 16-Membered Macrolides with Cytotoxic Activity: Isolation, Crystal Structure, and Conformation in Solution", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 35, No. 13/14, 1567-1569 (1996)
<i>BC</i>	CH	Hofle, G., et al., "N-Oxidation of Epothilone A-C and O-Acylation Rearrangement to C-19 and C-21-Substituted Epothilones", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 38, No. 13/14, 1971-1974 (1999)
<i>BC</i>	CI	Inokuchi, T., et al., "Opening of Epoxides to Olefins or Halohydrins with Vanadium(II)-Tetrahydrofuran or Vanadium(III)-Tetrahydrofuran Complexes", <i>Synlett</i> , No. 6, 510-512 (1992)
<i>BC</i>	CJ	Kowalski, R. J., et al., "Activities of the Microtubule-stabilizing Agents Epothilones A and B with Purified Tubulin and in Cells Resistant to Paclitaxel (Taxol®)", <i>J. Biol. Chem.</i> , Vol. 272, No. 4, 2534-2541 (1997)
<i>BC</i>	CK	Kupchan, S. M., et al., "Reductive Elimination of Epoxides to Olefins with Zinc-Copper Couple", <i>J. Org. Chem.</i> , Vol. 36, No. 9, 1187-1190 (1971)
<i>BC</i>	CL	Martin, M. G., et al., "Epoxides as Alkene Protecting Groups. A Mild and Efficient Deoxygenation", <i>Tetrahedron Letters</i> , Vol. 25, No. 3, 251-254 (1984)

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.) (Continued)

	CM	McMurtry, J. E., et al., "Reduction of Epoxides to Olefins with Low-Valent Titanium", <i>J. Org. Chem.</i> , Vol. 40, No. 17, 2555-2556 (1975)
	CN	McMurtry, J. E., et al., "Some Deoxygenation Reactions with Low-Valent Titanium ($TiCl_3/LiAlH_4$)", <i>J. Org. Chem.</i> , Vol. 43, No. 17, 3249-3254 (1978)
	CO	Meng, D., et al., "Remote Effects in Macrolide Formation Through Ring-Forming Olefin Metathesis: An Application to the Synthesis of Fully Active Epothilone Congeners", <i>J. Am. Chem. Soc.</i> , Vol. 119, No. 11, 2733-2734 (1997)
	CP	Nicolaou, K. C., et al., "An Approach to Epothilones Based on Olefin Metathesis", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 35, No. 20, 2399-2401 (1996)
	CQ	Nicolaou, K. C., et al., "Total Synthesis of Epothilone A: The Macrolactonization Approach", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 36, No. 5, 525-527 (1997)
	CR	Nicolaou, K. C., et al., "Designed Epothilones: Combinatorial Synthesis, Tubulin Assembly Properties, and Cytotoxic Action against Taxol-Resistant Tumor Cells", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 36, No. 19, 2097-2103 (1997)
	CS	Nicolaou, K. C., et al., "The Olefin Metathesis Approach to Epothilone A and Its Analogues", <i>J. Am. Chem. Soc.</i> , Vol. 119, No. 34, 7960-7973 (1997)
	CT	Nicolaou, K. C., et al., "Total Syntheses of Epothilones A and B via a Macrolactonization-Based Strategy", <i>J. Am. Chem. Soc.</i> , Vol. 119, No. 34, 7974-7991 (1997)
	CU	Nicolaou, K. C., et al., "Synthesis of Epothilones A and B in Solid and Solution Phase", <i>Nature</i> , Vol. 387, 268-272 (1997)
	CV	Nicolaou, K. C., et al., "Synthesis of Epothilones A and B in Solid and Solution Phase" (Correction to <i>Nature</i> 387, 268-272 (1997)), <i>Nature</i> , 390, 100 (1997)
	CW	Raucher, S., et al., "Total Synthesis of (+)-Dihydrocostunolide via Tandem Cope-Claisen Rearrangement", <i>J. Org. Chem.</i> , Vol. 51, No. 26, 5503-5505 (1986)
	CX	Sato, M., et al., "Reduction of Organic Compounds with Low-Valent Niobium ($NbCl_5/NaAlH_4$)", <i>Chem. Letters</i> , 157-160 (1982)
	CY	Schinzer, D., et al., "Total Synthesis of (-)-Epothilone A", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 36, No. 5, 523-524 (1997)
	CZ	Schober, R., et al., "Reduction and Isomerization of Oxiranes and -Diazoketones by Various Early Transition Metalloccenes", <i>Synlett</i> , Vol. 8, 465-466 (1990)

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P U T T I N G T H E P A T E N T I N G P R O C E S S I N P R O M P TDocket No.: LD125b Sheet 4 of 5
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OTHER (Including Author, Title, Date, Pertinent Pages, etc.) (Continued)

CAA	Sharpless, K. B., et al., "Lower Valen Tungsten Halides. A New Class of Reagents for Deoxygenation of Organic Molecules", <i>J. Amer. Chem. Soc.</i> , Vol. 94, No. 18, 6538-6540 (1972)
CAB	Su, D.-S., et al., "Total Synthesis of (-)-Epothilone B: An Extension of the Suzuki Coupling Method and Insights into Structure-Activity Relationships of the Epothilones", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 36, No. 7, 757-759 (1997)
CAC	Su, D.-S., et al., "Structure-Activity Relationships of the Epothilones and the First In Vivo Comparison with Paclitaxel", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 36, No. 19, 2093-2096 (1997)
CAD	Victory, S. F., et al., "Relative Stereochemistry and Solution Conformation of the Novel Paclitaxel-Like Antimitotic Agent Epothilone A", <i>Bioorg. Med. Chem. Letts.</i> , Vol. 6, No. 7, 893-898 (1996)
CAE	Winkler, J. D., et al., "A Model For The Taxol (Paclitaxel)/Epothilone Pharmacophore", <i>Bioorg. Med. Chem. Letts.</i> , Vol. 6, No. 24, 2963-2966 (1996)
CAF	Yang, Z., et al., "Total Synthesis of Epothilone A: The Olefin Metathesis Approach", <i>Angew. Chem. Int. Ed. Engl.</i> , Vol. 36, No. 1/2, 166-168 (1997)
CAG	Bollag, D., et al., "Epothilone, A New Structural Class of Microtubule Stabilizer", Abstract, <i>Proc. Am. Assoc. Cancer Res.</i> , Vol. 36, 86 Meet. 454 (1995)
CAH	Bollag, D., "Epothilones: Novel Microtubule-Stabilising Agents", <i>Expert Opin. Invest. Drugs</i> , Vol. 6, No. 7, 867-873 (1997)
CAI	Bertinato, P., et al., "Studies Toward a Synthesis of Epothilone A: Stereocontrolled Assembly of the Acyl Region and Models for Macrocyclization", <i>J. Org. Chem.</i> , Vol. 61, No. 23, 8000-8001 (1996)
CAJ	<i>Chemical & Engineering News</i> , "Epothilone Epiphany: Total Syntheses", Vol. 74, No. 52, 24-26 (1996)
CAK	<i>Chemical & Engineering News</i> , "First Total Synthesis of Epothilone B", Vol. 75, No. 13, 23 (1997)
CAL	<i>Chemical & Engineering News</i> , "Solid-Phase Epothilone Synthesis Used to Create Analog Library", Vol. 75, No. 20, 33 (1997)
CAM	Claus, E., et al., "Synthesis of the C1-C9 Segment of Epothilons", <i>Tetrahedron Lett.</i> , Vol. 38, No. 8, 1359-1362 (1997)
CAN	De Brabander, J., et al., "Towards a Synthesis of Epothilone A: Rapid Assembly of the C1-C6 and C7-C12 Fragments", <i>Synlett</i> , Vol. 7, 824-826 (1997)
CAO	Gabriel, T. and Wessjohann, L., "The Chromium-Reformatsky Reaction: Asymmetric Synthesis of the Aldol Fragment of the Cytotoxic Epothilons from 3-(2-Bromoacyl)-2-Oxazolidinones", <i>Tetrahedron Lett.</i> , Vol. 38, No. 8, 1363-1366 (1997)
CAP	Gerth, K., et al., "Epothilons A and B: Antifungal and Cytotoxic Compounds from <i>Sorangium cellulosum</i> (Myxobacteria) Production, Physico-chemical and Biological Properties", <i>J. Antibiotics</i> , Vol. 49, No. 6, 560-563 (1996)
CAQ	Marshall, A., "Total Synthesis of Epothilone", <i>Nature Biotechnology</i> , Vol. 15, No. 3, 205 (1997)

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CAR	Meng, D., et al., "Studies Toward a Synthesis of Epothilone A: Use of Hydropryan Templates for the Management of Acyclic Stereochemical Relationships", <i>J. Org. Chem.</i> , Vol. 61, No. 23, 7998-7999 (1996)
CAS	Meng, D., et al., "Total Syntheses of Epothilones A and B", <i>J. Am. Chem. Soc.</i> , Vol. 119, No. 42, 10073-10092 (1997)
CAT	Menschling, S. and Kalesse, M., "Generation of Thiazoles by Column Dehydrogenation of Thiazolidines with MnO ₂ ", <i>J. Prakt. Chem.</i> , Vol. 339, No. 1, 96-97 (1997)
CAU	Mulzer, J. and Mantolidis, A., "Synthesis of the C(1)-C(9) Segment of the Cytotoxic Macrolides Epothilon A and B", <i>Tetrahedron Lett.</i> , Vol. 37, No. 51, 9179-9182 (1996)
CAV	Nicolaou, K., et al., "Chemistry, Biology and Medicine of Selected Tubulin Polymerizing Agents", <i>Pure Appl. Chem.</i> , Vol. 71, No. 6, 989-997 (1999)
CAW	Nicolaou, K., et al., "Total Synthesis of Epothilone E and Related Side-chain Modified Analogues Via a Stille Coupling Based Strategy", <i>Bioorg. Med. Chem.</i> , Vol. 7, No. 5, 665-697 (1999)
CAX	Schinzer, D., et al., "Studies Towards the Total Synthesis of Epothilones: Asymmetric Synthesis of the Key Fragments", <i>Chem. Eur. J.</i> , Vol. 2, No. 22, 1477-1482 (1996)
CAY	Taylor, R. and Haley, J., "Towards the Synthesis of Epothilone A: Enantioselective Preparation of the Thiazole Sidechain and Macroyclic Ring Closure", <i>Tetrahedron Lett.</i> , Vol. 38, No. 12, 2061-2064 (1997)
CAZ	Schinzer, D., et al., "Syntheses of (-)-Epothilone A", <i>Chem. Eur. J.</i> , Vol. 5, No. 9, 2483-2491 (1999)
CBA	Schinzer, D., et al., "Syntheses of (-)-Epothilone B", <i>Chem. Eur. J.</i> , Vol. 5, No. 9, 2492-2500 (1999)
CBB	Nicolaou, K. C., et al., "Synthesis and Biological Properties of C12,13-Cyclopropylepothilone A and Related Epothilones", <i>Chemistry & Biology</i> , Vol. 5, No. 7, 365-372 (1998)

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